



Helix Kit

Components

Helix Planning Guide



Helix Kit

Components

*A lightweight, strong
and easy way to
build a helix!*

Our hobby requires a wide variety of skills to be able to actually complete a model railroad of any size. It's also safe to say that our experiences and skill levels are different from person to person. We have developed a simple system of components to get you on your way to building a helix or adding sub-roadbed without the use of power tools.

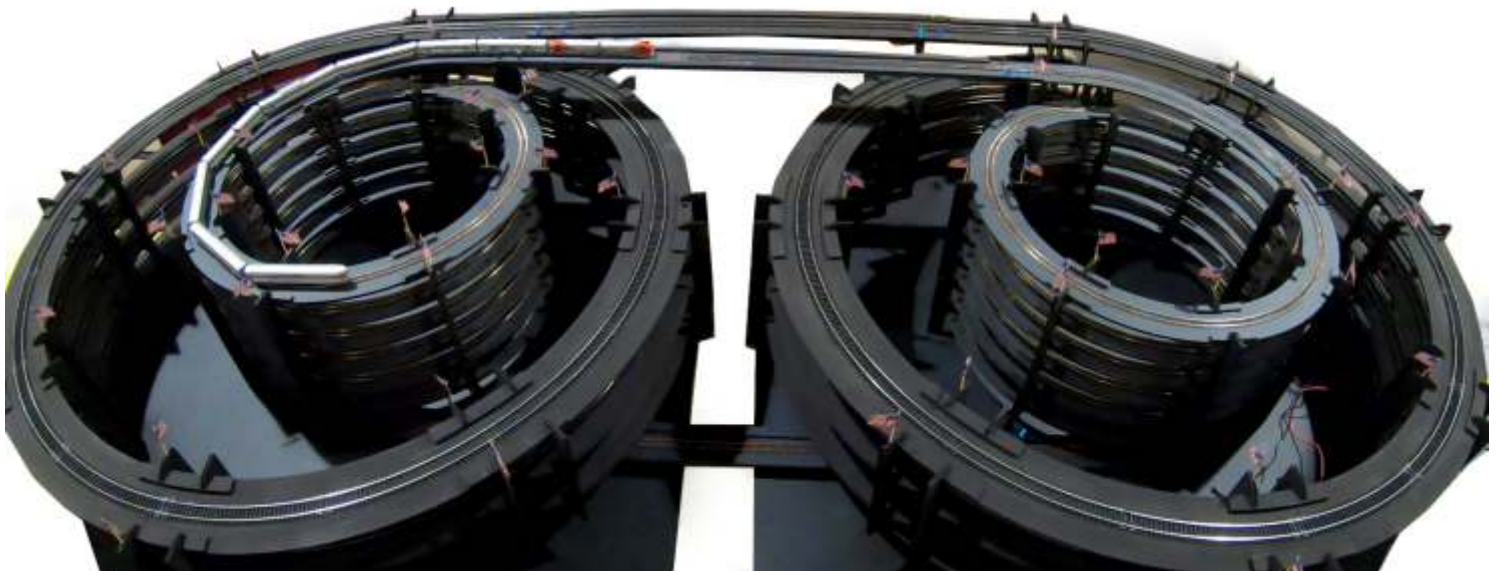
Example of an assembled Helix



Assembly Required



Let's make this as easy as possible



This video offers a quick look at how our helix components work together!



Click image above to go to video if connected to internet

1ST STOP!

If you have not seen our introduction video, now is a good time. This video offers a look at how our helix components work together



There are those that have already planned to use a helix and there are those that are thinking about the all the possibilities. A helix can totally change the dynamics of a layout when looking at it from an operational standpoint.

Despite your skill level or experience in the hobby, at one time or another you have heard or willhear a lot of discussion about curve radius. Some of the most asked questions in all of modelrailroading are “what curve radius is too tight?” and “what grade is too steep?”. While the answers can involve a lot of variables, more times than not, it comes down to what equipment you are planning to run on your layout.

With that in mind, we wanted some answers. We put our prototype helix assemblies to the test and created a video for demo purposes. Not only will this video give you good look at our helix in action, it just might give you some insight into how you can plan yours.

Tight curve challenge video

HO Scale layout
2 helix structures
22” radius curves
Variety of 4 and 6 axle diesels and various steam locomotives and rolling stock.

Please note that the helix structures in the video are of the prototype and differ slightly from our kit components.



Click image above to go to video if connected to internet

About this guide

This planning guide is provided to help the modeler familiarize themselves with our available components and see how they are designed to work together. Information relating to each specific component can be found on their respective website product pages.

The contents are intended to provide product information and enough general information for the modeler to plan for and design their own helix using our components. Some of the information you see will be reiterated several times in different sections.

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Introduction

General Information:



You are not stuck with a one size fits all helix!

One level or multiple level.....it's up to you.

Yes, you can finally build a helix without all the research and labor of cutting raw materials, but you will need to put your "thinking cap" on. Our components are the model equivalent of "you building a structure from scratch", only.....the pieces are cut for you.

The components, when used together, provide a great way to gain elevation from one level to another and act as a helix kit. These component types are sold separately so that you may have the freedom to create a helix that suits your needs where you only need to purchase what you need.

Some may wish to purchase all components necessary to create a complete helix while others may wish to only purchase the items necessary to complete the loops and then create their own risers to achieve a specific grade profile.



Components can be used however you wish!

Create your own helix kit à la carte.

Deck section components are offered in various centerline radius configurations. Some may wish to use the exact deck centerline as their track centerline, while others may wish to offset their track centerline radius +/- the deck centerline. Many of the deck sections were designed around radius ranges found in some of the commercially available single and double sectional track offerings. This should make it easier to select the components you need when planning your helix with commercially pre-curved track in mind.

While deck section item numbers and descriptions may reflect a suggested or intended use, such as a particular model scale (HO or N), in actuality, they may be used for whatever you want to use them for. All deck section product pages have a detailed specification sheet that outlines the centerline radius and the width dimensions. With that information, the deck sections could be applied to a variety of model scales and (or) track configurations.

Additionally, an oval shaped helix can be created with a combination of curved and straight deck sections.

No fear approach!

While you do not need an engineering degree to assemble the components and create a helix, it is to be understood that all components are in raw form. There is **no "snap together" feature** and there is no "all inclusive" instruction booklet, but that is the beauty of it. There are only a few different components that make up a helix. While we can offer suggestions and tips, it is customer responsibility to be knowledgeable about the helix they intend to build. We simply provide the pieces for you to assemble.

Planning Overview

Considerations:

I want this radius with this % grade!

We wish it was that simple, but, unfortunately, MATH plays a part in how it all works.

While we offer a range of deck radiuses that can be used for single or double track, we obviously can not offer every imaginable combination. It also would not be feasible for us to create one-off components for each individual.

If you have already planned a specific radius that does fit into our available ranges, you may need to make considerations based on what is available. If you have a specific radius and rise (grade), using our precut risers may or may dictate that exact rise. In a case where you must have a specific grade/rise and our risers do not allow that, you may wish to fashion your own risers.

In most cases, the available varieties of decks and risers should give you plenty of options to plan and work with.

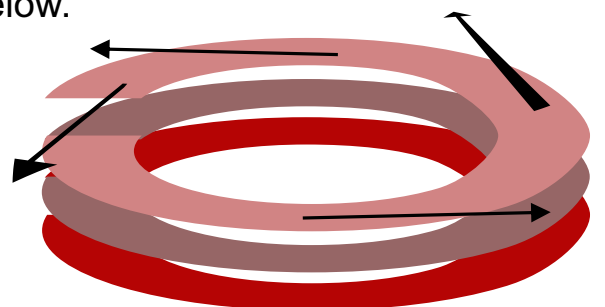
Sure, you can use any available radius and you can also dictate your own specific grade using your own risers, however keep in mind that you may not end up with the vertical clearances you need depending on the equipment you are running.

Our precut risers (Standard and Extended) will dictate a specific grade based on the specific radius used with them.

Planning Tip

In most cases, you won't enter and exit a helix at the same angle. Plan your helix entry and exit points accordingly. Typically, the loops of the helix will be on a grade so you should consider that any sections entering and leaving the helix should maintain that grade until that section clears the deck above or below.

Full loops would allow you to enter and exit the helix in the same direction. The angles in which you enter and exit the helix will determine how many sections are required for partial loops as well as how many levels a riser should have at given points.



Familiarize yourself with the Components

Component Substrate Material: Lightweight and strong

Our components are made from laser cut pieces of Gator Board which is a type of display board that features a dense inner core made of foam and a rigid exterior made of wood-fiber veneer. This exterior is somewhat water resistant and will not easily break or warp. The lightweight nature of this substrate makes construction and handling easy and also gives you the ability to cut and trim as desired.

Components that make up a helix are as easy as 1, 2, 3
There are only 3 types of parts:

(1) Deck Sections

Deck sections make up helix loops or act as sub-roadbed (secured with clamps)



(3) Precut Risers

Risers elevate loops to a specific height and secure the helix structure



(2) Clamps (connectors)

Clamps secure deck sections together to create loops

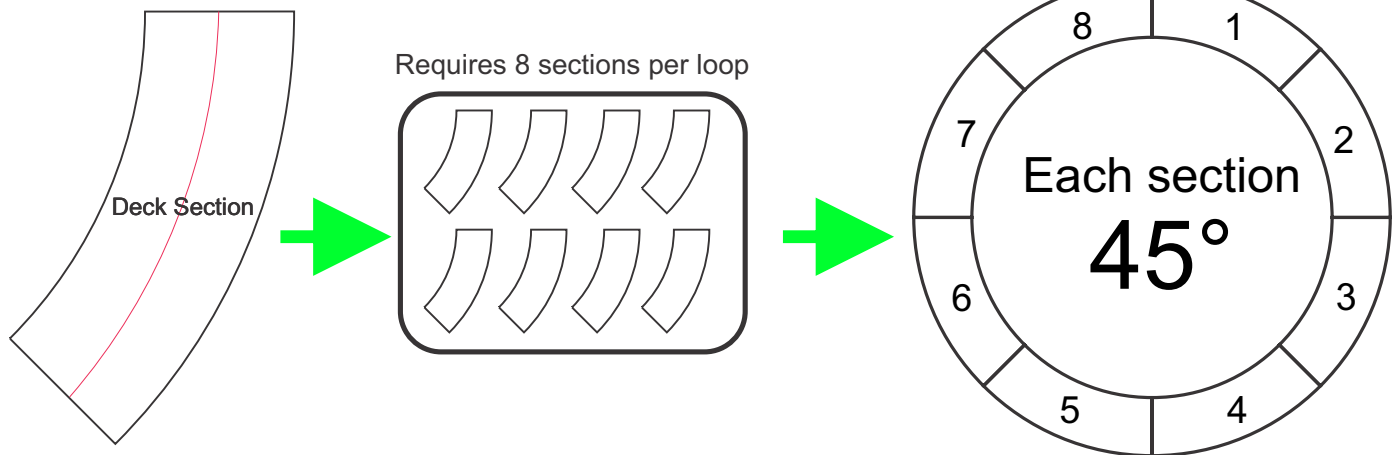


Familiarize yourself with the Components

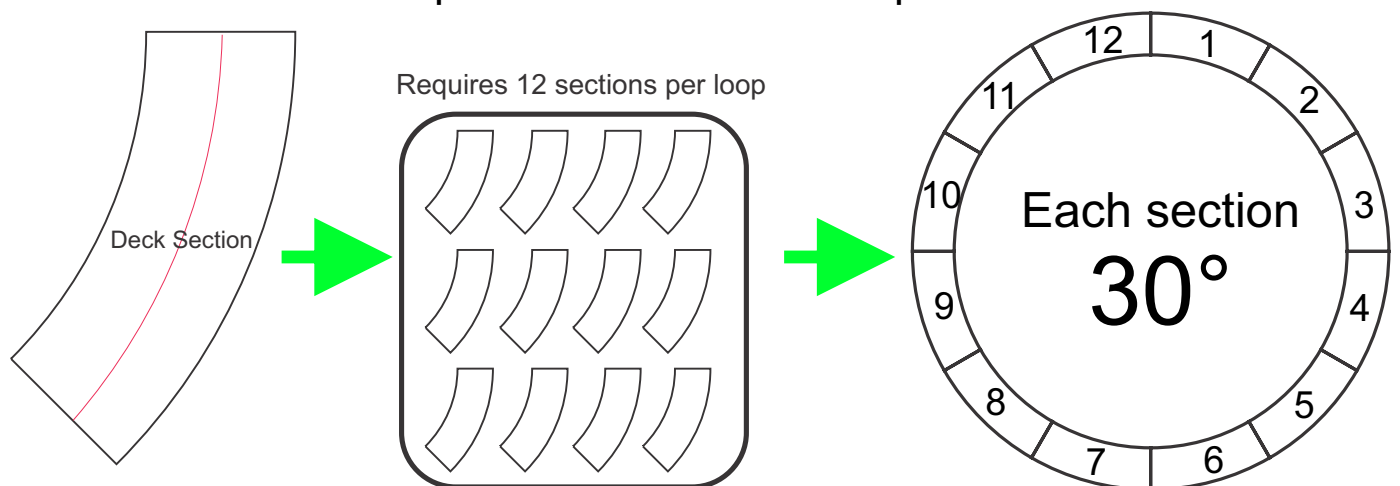
① Deck Sections: Deck sections (curved) make up loops (secured with clamps)

For the purpose of discussion, a helix is made up of loops that in some fashion rise from the start to the end of each loop. Each loop is comprised of a number of smaller curved sections that, when put together, complete a loop. We will call the sections that make up a loop “deck sections”

Example of an 8 section loop



Example of an 12 section loop



- ★ Curved deck sections have a scribed centerline on one side (can be used either way)
- ★ Straight deck sections (not shown) are also available for use as sub-roadbed
- ★ All deck sections share the same thickness regardless of model scale.

Familiarize yourself with the Components

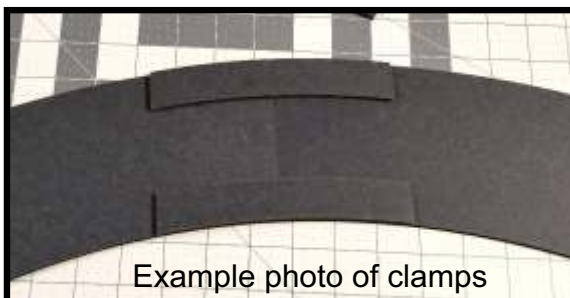
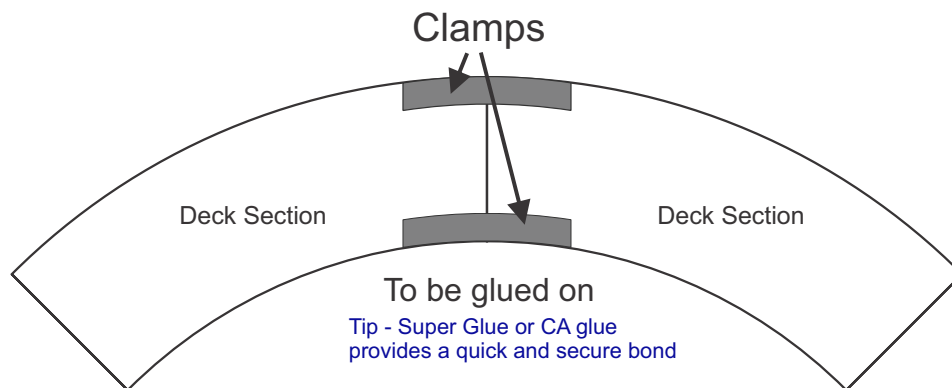
② Clamps (deck section connectors):

Deck sections need to be secured to each other to form a loop. “Clamps”, as we call them, are small curved Gator Board pieces that are to be glued to the outer edges of each connection point. Glued in place, the clamps provide a secure bond with each deck section. Additionally, when using our precut risers, the clamps provide secure mounting points for the risers and conform with standard practices regarding vertical and lateral clearances.

Note: Curved deck sections include clamps

With each individual curved deck section purchased, 2 appropriate type clamps are included.

Clamps are not included when purchasing straight deck sections. Straight or transition clamps must be purchased separately.



(Example) Straight clamp
for straight deck to straight deck



(Example) Transition clamp
for curved deck to straight deck



Clamps are a different size and shape for HO Scale vs N Scale, but all share the same material thickness.

- ★ Clamps have no specific right or left orientation (can be used either way)
- ★ Straight clamps and transition clamps are also available
- ★ All clamps share the same thickness regardless of model scale

Familiarize yourself with the Components

③ Precut Risers:

Our precut risers are made of the same Gator Board material. Precut risers offer an easy way to create a specific rise in elevation from one level to another while providing secure support to the helix structure.

These risers are designed to meet or exceed standard practices “height and width” clearances while also tying the structure together.

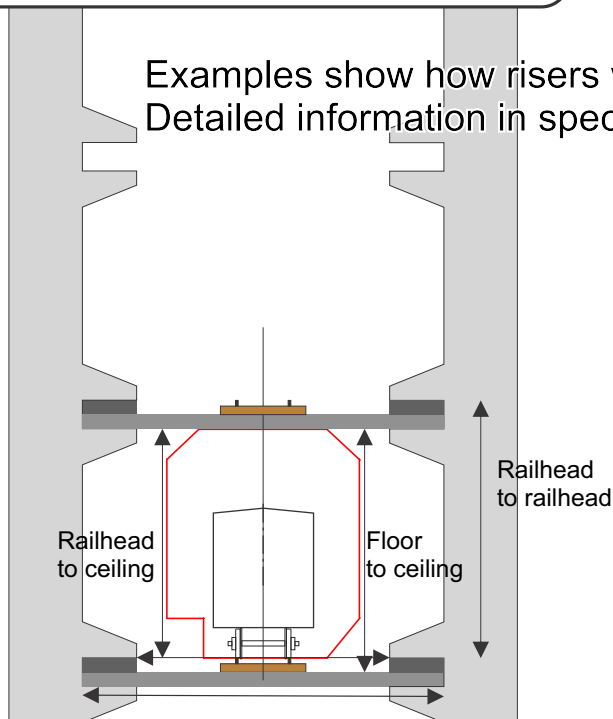
The risers have notches for a fixed rise to each level and do not provide means of adjustability like other alternative methods such as the “threaded rod and nut method” or “cutting your own riser blocks”. The precut risers provide a constant fixed grade that is determined by the radius and riser type you choose.

The design of the fixed elevation rises in HO scale and N Scale conform to or exceed standard practices concerning lateral and vertical clearances. More info can be found in precut riser sections.

Two versions of precut risers are available for both HO scale and N Scale.

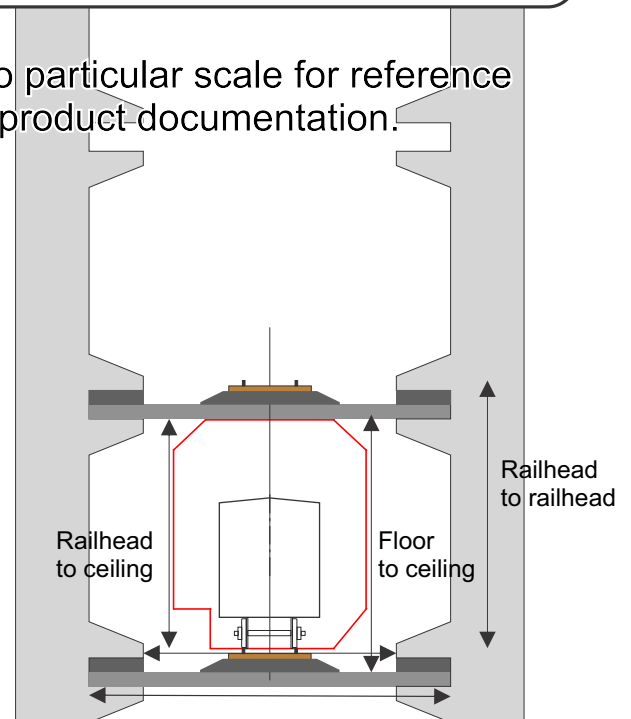
Standard Preset Risers

Standard Risers are designed to be used where track has no pre-installed roadbed or where no roadbed is used under the track.



Extended Preset Risers

Designed to be used where track has pre-installed roadbed or where the user has added roadbed under the track.



Familiarize yourself with the Components

How components fit together

Note:

Be sure to choose risers with appropriate number of levels for your helix. Consider ahead of time where your entry and exit points will be and how many levels that will be.

Example: A helix with 3 complete loops would require 4 level risers at the entry and exit point. As you can see in the illustration below, 3 level risers would be used elsewhere. It's easier to have taller risers that you can cut down to the levels you need.

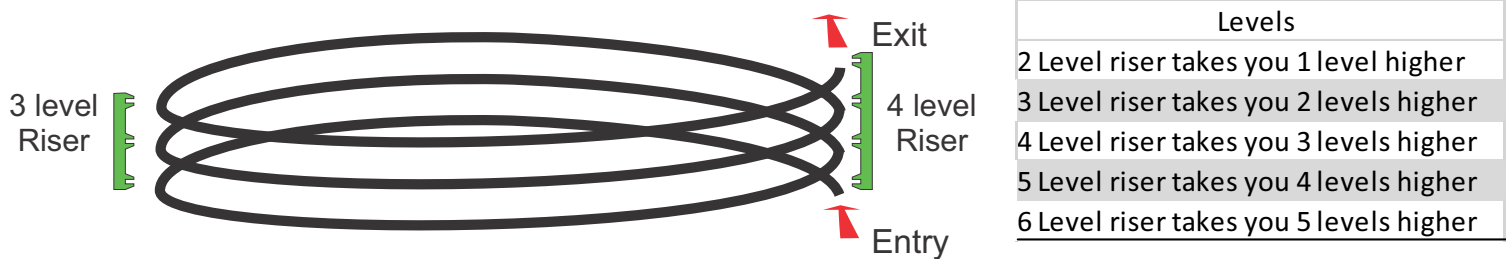
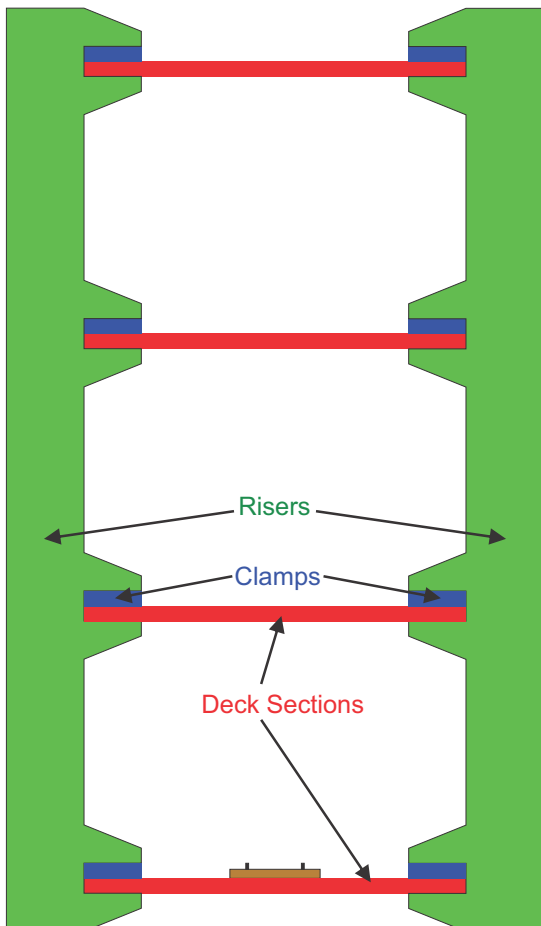


Illustration shows how the separate components fit together.



Example below using QTY 4 of the 4 level risers at each connection point



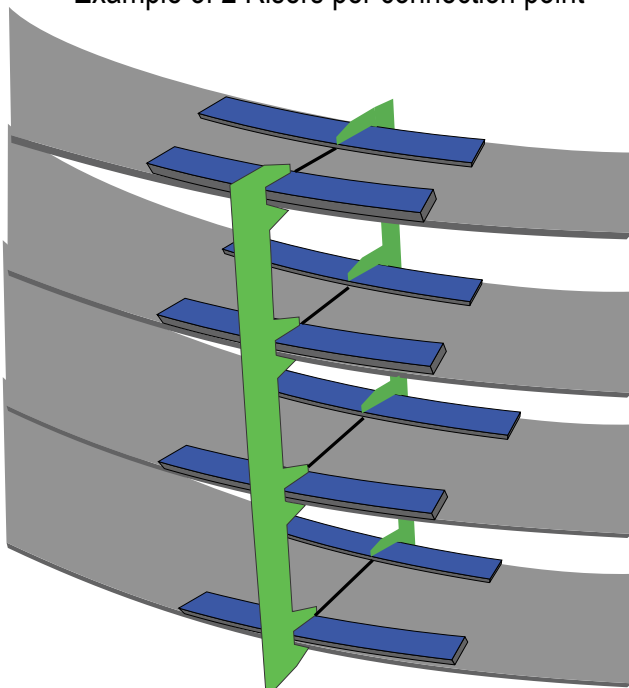
Familiarize yourself with the Components

Riser Configuration on Helix

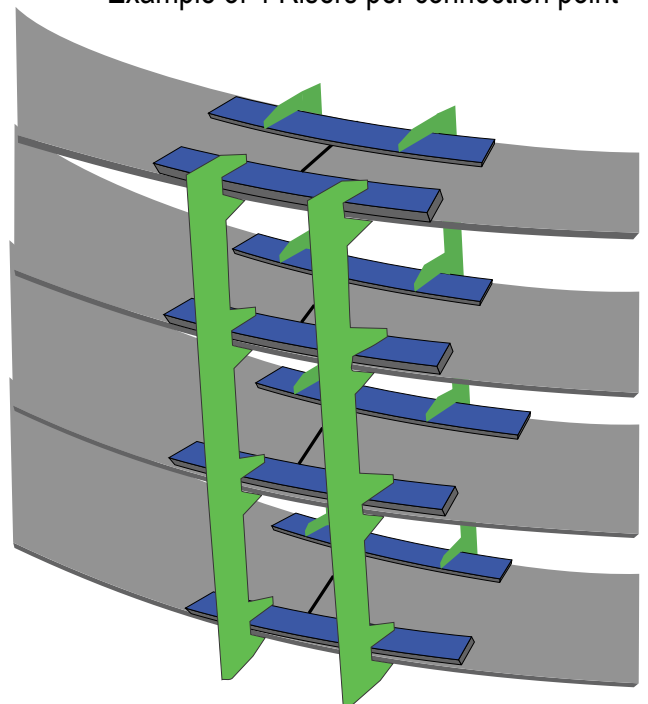
Risers should be mounted at the inside and outside of each connection point as the riser notch is designed to allow a deck section and clamp to sit inside each notch. A minimum of 2 risers at each connection point should be observed. When all contact points are glued, a minimum of 2 risers per connection point will allow for a secure structure with shorter N and HO applications.

- ★ While there is no set rule as to how many risers have to be used at each point, it is suggested, that for taller structures or ones that require doubling risers for added height, additional risers be used. **Doubling? - See next page**

Example of 2 Risers per connection point



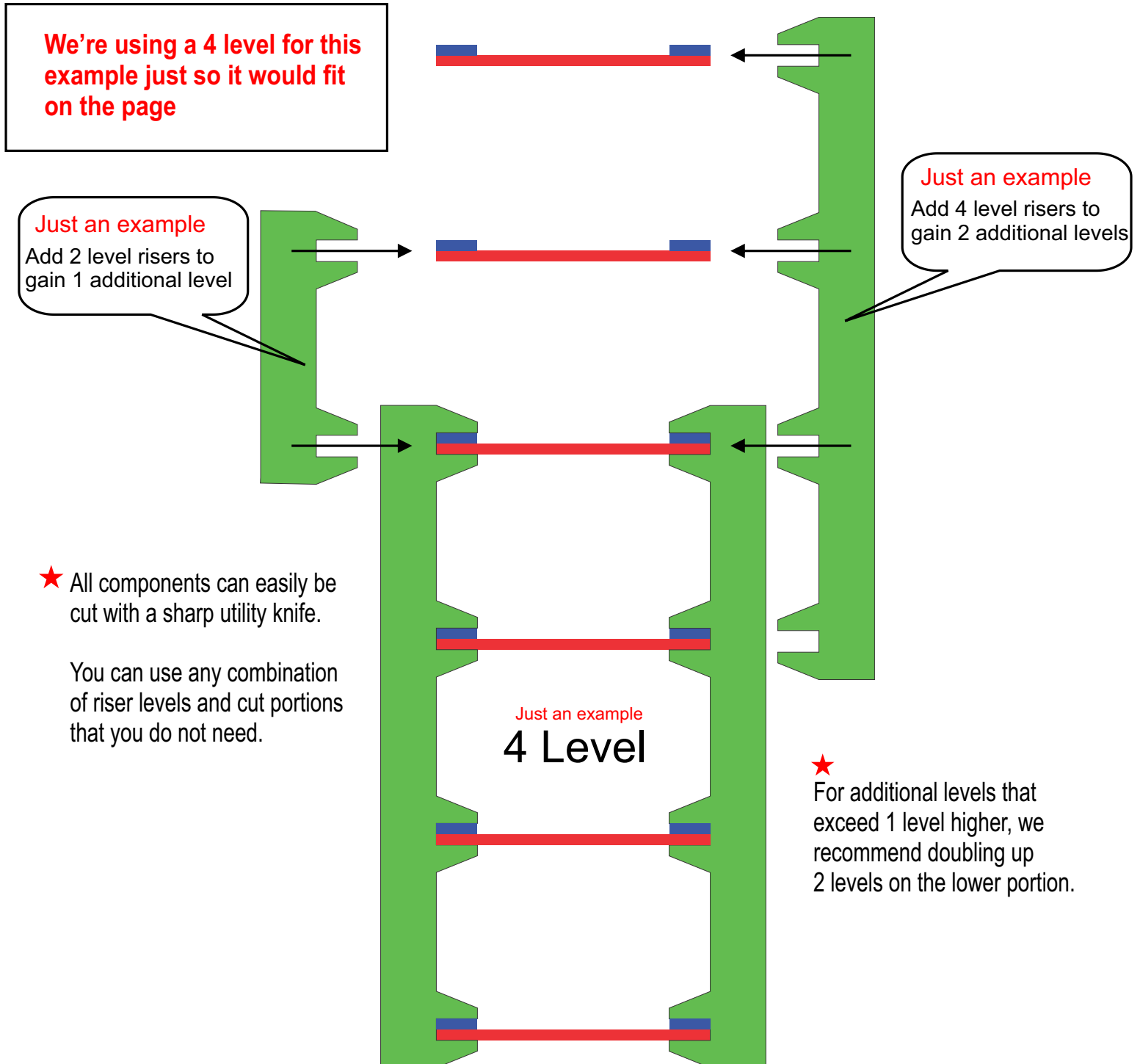
Example of 4 Risers per connection point



Familiarize yourself with the Components

Risers Doubling - Gaining extra height for a taller helix

Where your required number of levels exceeds the number of levels for an available riser, use risers in a double up fashion. See basic examples below. When all components are glued together, this adds extra strength to the entire structure. It's just as simple to use taller risers and cut off excess levels.



Get Started *Let's make this as easy as possible*

Model scale relating to our components is just a matter of association as most tend to look for items labeled with the scale in which they model. With that in mind, you can certainly use any of the components how you see fit. All curved deck section part numbers contain the centerline radius of the deck section itself as part of the item number.

A deck section centerline radius..... is a centerline radius. A deck section does not know what track centerline will be applied to it. In many cases, you can offset your track centerline radius as long it retains proper or required lateral clearances. In other words, your track centerline radius does not necessarily have to be that of the centerline of the deck section. Each deck section product has a spec sheet.

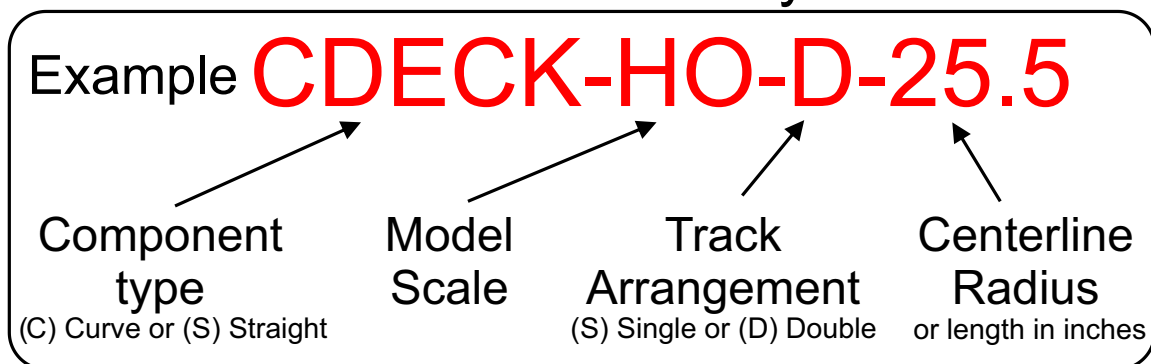
Deck section widths can differ, but all have been designed to allow proper lateral clearance when using our risers according to model scale.

A good example would be a double track application.

This applies to both single and double track. For single track, sure, the deck centerline might be the same as your track centerline, but in a double track application, it may not be one of your track centerlines.

Example - CDECK-HO-D-25.5 = The 25.5 would indicate 25.5" as the deck centerline radius. If your inner track is 24" radius and your outer track is 26" radius, then the 25.5 deck centerline radius would work well for this application. All deck section product pages have specs.

Part Number Key



NOTES:

HO Scale Single Track deck sections share the same deck width as N Scale Double Track. This means you can use any of the HO Single track deck sections as N Scale single or double track. **In this case, be aware that if using our risers, you would want to select N Scale risers.**

NI SCALE

N Scale Deck Sections

Listed and sold per individual section

N Scale Single Track Curve (N Scale = 8 sections per loop)						Approximate Grade % Using N Scale Risers	
Item	Radius Coverage	Deck Width	Centerline Radius	Centerline loop Diameter	Centerline loop Circumference	Standard Risers	Extended Risers
CDECK-N-S-11.125	11.00" Thru 11.5" Radius (inc 11"/282mm)	3	11.125	22.25	69.865	3.03	3.25
CDECK-N-S-12.5	12.25" Thru 12.75" (inc 12-3/8/315mm)	3	12.5	25	78.5	2.69	2.89
CDECK-N-S-13.75	13.5" thru 14.00" (inc 13.75"/348mm)	3	13.75	27.5	86.35	2.45	2.63
DCECK-N-S-15	14.75" thru 15.25" (inc 15"/381mm)	3	15	30	94.2	2.25	2.41
CDECK-N-S-16.25	16" thru 16.5"	3	16.25	32.5	102.05	2.07	2.23
CDECK-N-S-17.5	17.25" thru 17.75"	3	17.5	35	109.9	1.92	2.07
CDECK-N-S-18.875	18.75" thru 19" (481mm)	3	18.875	37.75	118.535	1.78	1.92
CDECK-N-S-20	19.75" thru 20.25"	3	20	40	125.6	1.68	1.81

* N Scale deck sections are designed for 8 sections to complete a loop. Each section comprises 45° of a loop

N Scale Double Track Curve (N Scale = 8 sections per loop)						Approximate Grade % Using N Scale Risers	
Item	Radius Coverage	Deck Width	Centerline Radius	Centerline loop Diameter	Centerline loop Circumference	Standard Risers	Extended Risers
CDECK-N-D-11.75	Covers 10.5" inside track min thru 13" outside max	5	11.75	23.5	73.79	2.87	3.08
CDECK-N-D-13	Covers 11.75" inside track min thru 14.25" outside max	5	13	26	81.64	2.59	2.78
CDECK-N-D-15.65	Covers 14.25" inside track min thru 17" outside max	5	15.65	31.3	98.282	2.15	2.31
CDECK-N-D-18.25	Covers 17" inside track min thru 19.25" outside max	5	18.25	36.5	114.61	1.85	1.98

* N Scale deck sections are designed for 8 sections to complete a loop. Each section comprises 45° of a loop
 **See specific deck section product information for use with popular commercially available pre-curved double track

N Scale Single Track Straight				
Item	Description	Deck Width	Deck Length	
SDECK-N-S-6	6" straight deck section	3	6	
SDECK-N-S-12	12" straight deck section	3	12	

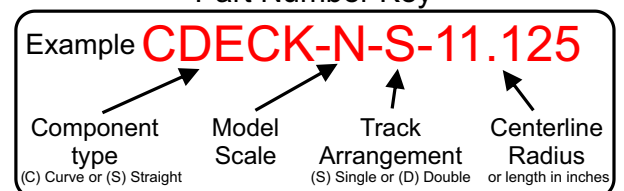
N Scale Double Track Straight				
Item	Description	Deck Width	Deck Length	
SDECK-N-D-6	6" straight deck section	5	6	
SDECK-N-D-12	12" straight deck section	5	12	

N Scale deck sections were designed around popular and commercially available pre-curved sectional track in both single and double track varieties such as Kato and Atlas. This makes for easy selections based on your intended track radius. See specific deck section product information for further details.

For N Scale radius larger than 20", you can use HO Single track deck sections for both single and double track in N Scale. As info, HO Single and N Scale Double share the same deck width.

If you use HO deck sections for your N Scale helix with our risers, make sure you purchase N Scale risers to get the proper rise.

Part Number Key



N Scale Risers

Listed and sold in packs

N Scale Standard Riser

Item	Description	Riser per level Railhead to Railhead
RISER-ST-N-2	N Scale Standard 2 Level	2.115"
RISER-ST-N-3	N Scale Standard 3 Level	2.115"
RISER-ST-N-4	N Scale Standard 4 Level	2.115"
RISER-ST-N-5	N Scale Standard 5 Level	2.115"
RISER-ST-N-6	N Scale Standard 6 Level	2.115"

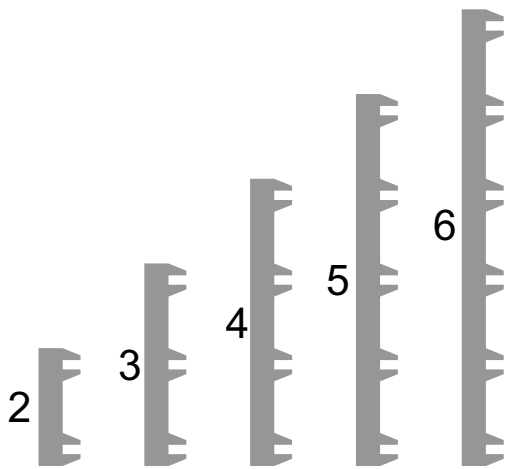
N Scale Extended Riser

Item	Description	Riser per level Railhead to Railhead
RISER-EX-N-2	N Scale Extended 2 Level	2.272"
RISER-EX-N-3	N Scale Extended 3 Level	2.272"
RISER-EX-N-4	N Scale Extended 4 Level	2.272"
RISER-EX-N-5	N Scale Extended 5 Level	2.272"
RISER-EX-N-6	N Scale Extended 6 Level	2.272"

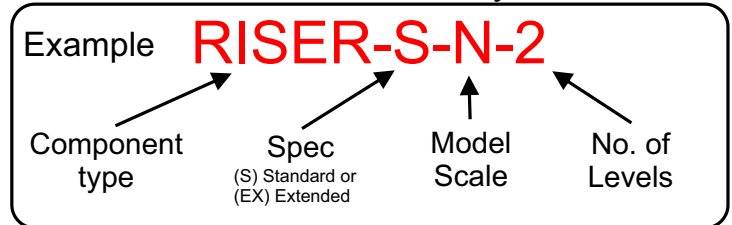
Standard Risers are designed to be used where track has no pre-installed roadbed or where no roadbed is used under the track. Measurements from railhead upwards assume bare track is on the floor of the helix deck. See specific product for more info.

Extended Risers are designed to be used where track has pre-installed roadbed or where the user has added roadbed under the track. Measurements from railhead upwards. See specific product for more info.

While you can use either version of riser (Standard or Extended), the Standard Riser may not provide enough vertical clearance if using roadbed under the track, depending on the equipment you are running.

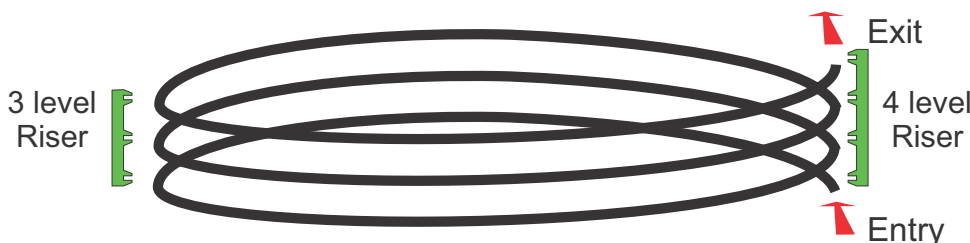


Part Number Key



Be sure to choose risers with appropriate number of levels for your helix. Consider ahead of time where your entry and exit points will be and how many levels that will be.

Example: A helix with 3 complete loops would require 4 level risers at the entry and exit point. As you can see in the illustration below, 3 level risers would be used elsewhere. It's easier to have taller risers that you can cut down to the levels you need.



Levels
2 Level riser takes you 1 level higher
3 Level riser takes you 2 levels higher
4 Level riser takes you 3 levels higher
5 Level riser takes you 4 levels higher
6 Level riser takes you 5 levels higher

Standard N Scale Risers (Specifications)

Risers are designed to provide an easy means getting to the next level of a loop/ring while securing the structure of the helix.

Standard Risers are designed to be used where track has no pre-installed roadbed or where no roadbed is used under the track. Measurements from railhead upwards assume bare track is on the floor of the helix deck.

While you can use either version of riser (Standard or Extended), the Standard Riser may not provide enough vertical clearance if using roadbed under the track, depending on the equipment you are running.

Although the rise height from level to level remains the same, keep in mind that the actual grade itself changes for different radius curves. (e.g. an 11" radius curve provides a steeper grade than that of a 12" curve radius and so on).

Standard N Scale Preset Risers

Assuming code 55-80 N Scale track

Floor to Ceiling 1.918" (48.721mm)

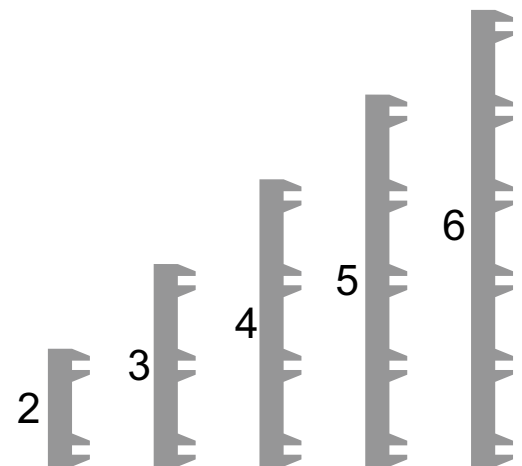
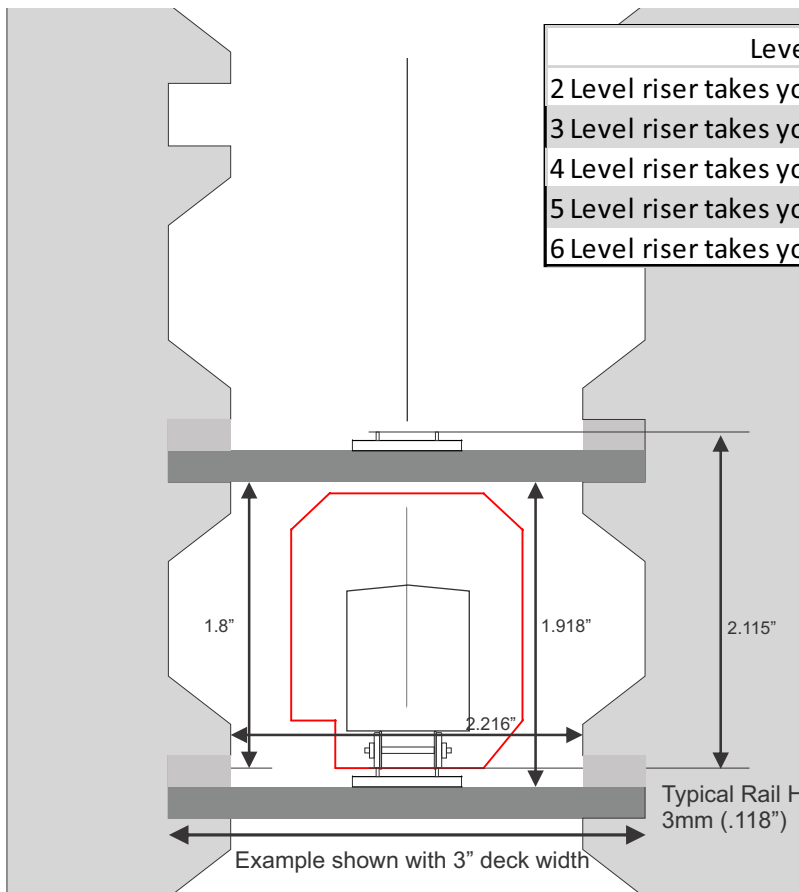
Railhead to ceiling 1.8" (45.72mm)

Rise per loop 2.115" (53.721mm)

This example is shown with N Scale single track 3" Deck width. With single track decks, where you are using the N Scale risers, the lateral clearances will be the same for standard or extended.

N Scale double track 5" deck width lateral clearances differ for the various radiuses available and can also differ for the particular radius track you are using. See your specific radius version for detailed info.

Levels	Total rise railhead to railhead
2 Level riser takes you 1 level higher	2.12
3 Level riser takes you 2 levels higher	4.23
4 Level riser takes you 3 levels higher	6.35
5 Level riser takes you 4 levels higher	8.46
6 Level riser takes you 5 levels higher	10.58



To calculate approximate grade:
 Find the loop/ring circumference of your intended radius and multiple x 3.14
 Find rise measurement (railhead to railhead)

$$\text{Grade \%} = \frac{\text{Rise (railhead to railhead)}}{\text{Circumference}} \times 100$$

Extended N Scale Risers (Specifications)

Risers are designed to provide an easy means getting to the next level of a loop/ring while securing the structure of the helix.

Extended Risers are designed to be used where track has pre-installed roadbed or user added roadbed is used under the track. Typical examples are a height of approx 1/4" from floor to railhead.

Although the rise height from level to level remains the same, keep in mind that the actual grade itself changes for different radius curves. (e.g. an 11" radius curve provides a steeper grade than that of a 12" curve radius and so on).

Extended N Scale Preset Risers

Assuming pre-installed or roadbed under track

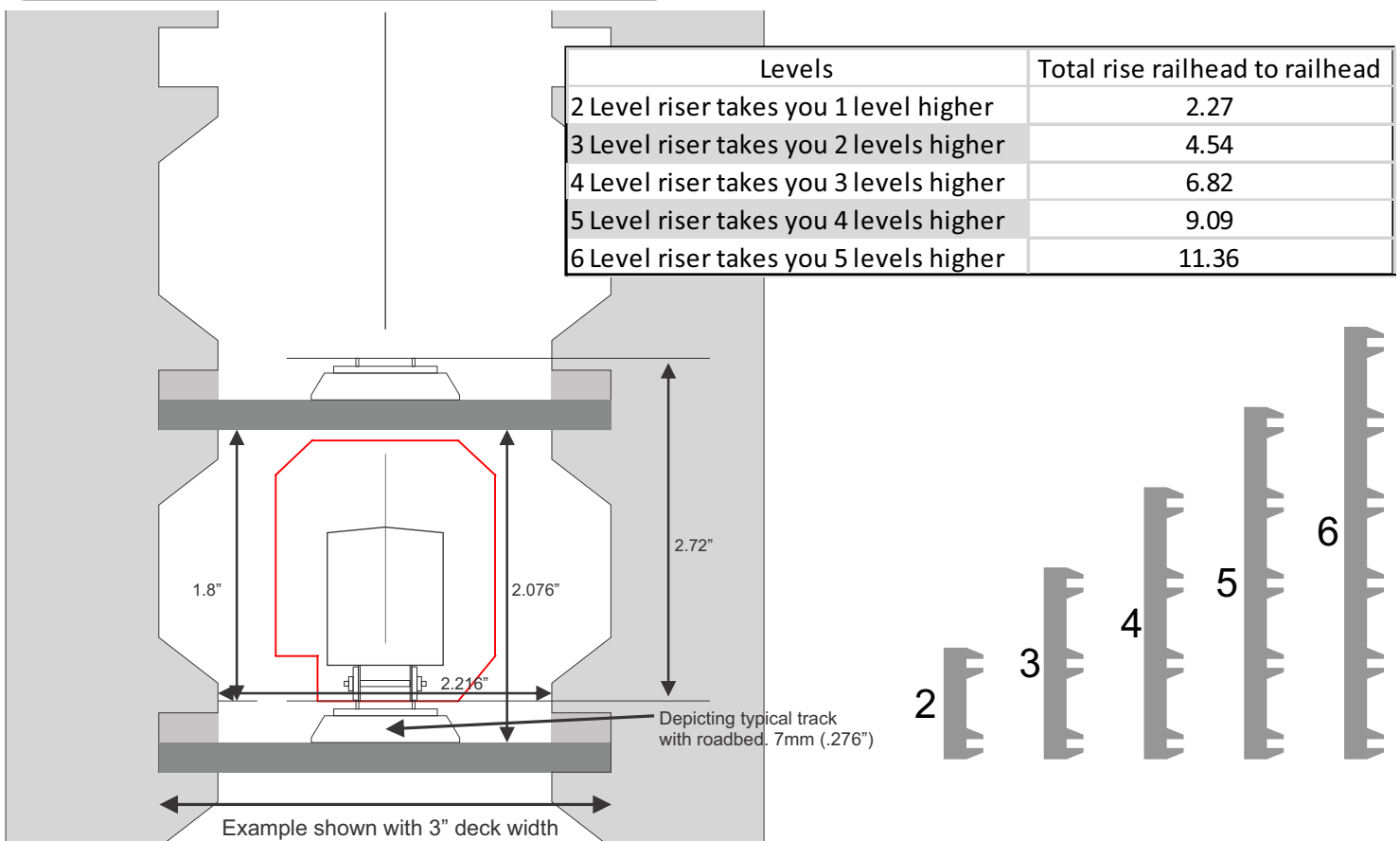
Floor to Ceiling 2.076" (52.721mm)

Railhead to ceiling 1.8" (45.72mm)

Rise per loop 2.272" (57.721mm)

This example is shown with N Scale single track 3" Deck width. With single track decks, where you are using the N Scale risers, the lateral clearances will be the same for standard or extended.

N Scale double track 5" deck width lateral clearances differ for the various radiuses available and can also differ for the particular radius track you are using. See your specific radius version for detailed info.



To calculate approximate grade:
 Find the loop/ring circumference of your intended radius and multiple x 3.14
 Find rise measurement (railhead to railhead)

$$\text{Grade \%} = \frac{\text{Rise (railhead to railhead)}}{\text{Circumference}} \times 100$$

N Scale Clamps (section connectors)

Listed and sold in packs

Note: Curved deck sections include clamps

This list is provided for those purchasing straight to straight, curve to straight or those that wish to purchase additional curve clamps

With each individual curved deck section purchased, 2 appropriate type clamps are included.

Clamps are not included when purchasing straight deck sections. Straight or transition clamps must be purchased separately.

For N Scale Single Track Curve Sections

For use with	Item	For use with	Item
CDECK-N-S-11.125	Clamp-1-N	Using CDECK-HO-S-22	Clamp-2-N
CDECK-N-S-12.5	Clamp-2-N	Using CDECK-HO-S-24	Clamp-2-N
CDECK-N-S-13.75	Clamp-2-N	Using CDECK-HO-S-26	Clamp-3-N
CDECK-N-S-15	Clamp-2-N	Using CDECK-HO-S-28	Clamp-3-N
CDECK-N-S-16.25	Clamp-2-N	Using CDECK-HO-S-30	Clamp-3-N
CDECK-N-S-17.5	Clamp-2-N	Using CDECK-HO-S-32	Clamp-3-N
CDECK-N-S-18.875	Clamp-2-N	Using CDECK-HO-S-34	Clamp-3-N
CDECK-N-S-20	Clamp-2-N	Using CDECK-HO-S-36	Clamp-3-N

N Scale users can use HO decks for N Scale single and double track curves exceeding 20" radius.

If you are doing this, remember to use N Scale Risers for your helix.

For N Scale Double Track Curve Sections

For use with	Item	For use with	Item
CDECK-N-D-11.75	Clamp-1-N	Using CDECK-HO-S-22	Clamp-2-N
CDECK-N-D-13	Clamp-2-N	Using CDECK-HO-S-24	Clamp-2-N
CDECK-N-D-15.65	Clamp-2-N	Using CDECK-HO-S-26	Clamp-3-N
CDECK-N-D-18.25	Clamp-2-N	Using CDECK-HO-S-28	Clamp-3-N
		Using CDECK-HO-S-30	Clamp-3-N
		Using CDECK-HO-S-32	Clamp-3-N
		Using CDECK-HO-S-34	Clamp-3-N
		Using CDECK-HO-S-36	Clamp-3-N

N Scale users can use HO decks for N Scale single and double track curves exceeding 20" radius.

If you are doing this, remember to use N Scale Risers for your helix.

N Scale straight and transition clamps.

For use with	Item
STRAIGHT TO STRAIGHT	Clamp-ST-N
CURVE TO STRAIGHT	Clamp-T-N

Curve to straight transition clamps have an oversized width so they can be used with the many radiuses. These must be trimmed to fit your application.

The only differences in clamp types 1, 2, 3 for both HO and N Scale are that the shapes are slightly different to allow less overlap for a given deck width.

HO SCALE

HO Scale Deck Sections

Listed and sold per individual section

HO Scale Single Track Curve

Item	Radius Coverage	Sections per loop	Deck Width	Centerline Radius	Centerline loop Diameter	Centerline loop Circumference	Approximate Grade % Using our Risers	
							Standard Risers	Extended Risers
CDECK-HO-S-18	18" Radius	8	5	18	36	113.04	3.15	3.27
CDECK-HO-S-20	20" Radius	8	5	20	40	125.6	2.84	2.95
CDECK-HO-S-22	22" Radius	8	5	22	44	138.16	2.58	2.68
CDECK-HO-S-24	24" Radius	8	5	24	48	150.72	2.36	2.46
CDECK-HO-S-26	26" Radius	12	5	26	52	163.28	2.18	2.27
CDECK-HO-S-28	28" Radius	12	5	28	56	175.84	2.03	2.11
CDECK-HO-S-30	30" Radius	12	5	30	60	188.4	1.89	1.96
CDECK-HO-S-32	32" Radius	12	5	32	64	200.96	1.77	1.84
CDECK-HO-S-34	34" Radius	12	5	34	68	213.52	1.67	1.73
CDECK-HO-S-36	36" Radius	12	5	36	72	226.08	1.58	1.64

HO decks may be used for N Scale applications. HO Scale Single and N Scale Double share the same 5" deck width. If using HO Decks for N Scale applications, be sure to use N Scale Risers

HO Scale Double Track Curve

Item	Radius Coverage	Sections per loop	Deck Width	Centerline Radius	Centerline loop Diameter	Centerline loop Circumference	Approximate Grade % Using HO Risers	
							Standard Risers	Extended Risers
CDECK-HO-D-19.5	18" inside min thru 21" outside max	8	8	19.5	39	122.46	2.91	3.02
CDECK-HO-D-21.5	20" inside min thru 23" outside max	8	8	21.5	43	135.02	2.64	2.74
CDECK-HO-D-23.5	22" inside min and 24" outside max	12	8	23.5	47	147.58	2.41	2.51
CDECK-HO-D-25.5	24" inside min and 27" outside max	12	8	25.5	51	160.14	2.23	2.31
CDECK-HO-D-27.5	26" inside min and 29" outside max	12	8	27.5	55	172.7	2.06	2.14
CDECK-HO-D-29.5	28" inside min and 31" outside max	12	8	29.5	59	185.26	1.92	2.00
CDECK-HO-D-31.5	30" inside and 33" outside max	12	8	31.5	63	197.82	1.80	1.87
CDECK-HO-D-33.5	32" inside min and 35" outside max	12	8	33.5	67	210.38	1.69	1.76

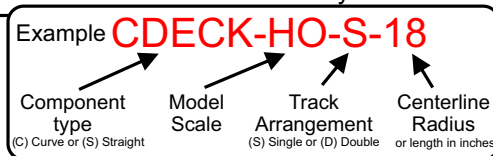
HO Scale Single Track Straight

Item	Description	Deck Width	Deck Length
SDECK-HO-S-6	6" straight deck section	5	6
SDECK-HO-S-12	12" straight deck section	5	12

HO Scale Double Track Straight

Item	Description	Deck Width	Deck Length
SDECK-HO-D-6	6" straight deck section	8	6
SDECK-HO-D-12	12" straight deck section	8	12

Part Number Key



HO Scale Risers

Listed and sold in packs

HO Scale Standard Riser

Item	Description	Riser per level Railhead to Railhead
RISER-ST-HO-2	HO Scale Standard 2 Level	3.564"
RISER-ST-HO-3	HO Scale Standard 3 Level	3.564"
RISER-ST-HO-4	HO Scale Standard 4 Level	3.564"
RISER-ST-HO-5	HO Scale Standard 5 Level	3.564"
RISER-ST-HO-6	HO Scale Standard 6 Level	3.564"

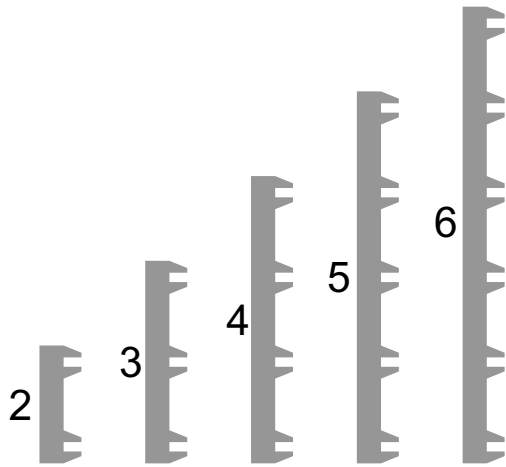
HO Scale Extended Riser

Item	Description	Riser per level Railhead to Railhead
RISER-EX-HO-2	HO Scale Extended 2 Level	3.702"
RISER-EX-HO-3	HO Scale Extended 3 Level	3.702"
RISER-EX-HO-4	HO Scale Extended 4 Level	3.702"
RISER-EX-HO-5	HO Scale Extended 5 Level	3.702"
RISER-EX-HO-6	HO Scale Extended 6 Level	3.702"

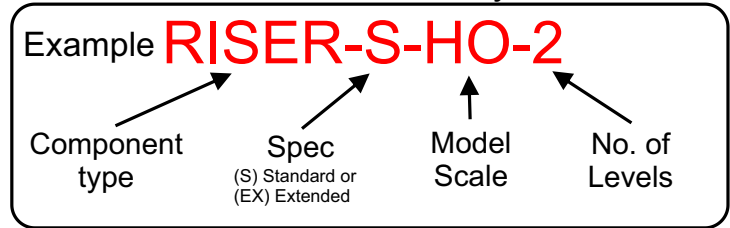
Standard Risers are designed to be used where track has no pre-installed roadbed or where no roadbed is used under the track. Measurements from railhead upwards assume bare track is on the floor of the helix deck. See specific product for more info.

Extended Risers are designed to be used where track has pre-installed roadbed or where the user has added roadbed under the track. Measurements from railhead upwards. See specific product for more info.

While you can use either version of riser (Standard or Extended), the Standard Riser may not provide enough vertical clearance if using roadbed under the track, depending on the equipment you are running.



Part Number Key



Be sure to choose risers with appropriate number of levels for your helix. Consider ahead of time where your entry and exit points will be and how many levels that will be.

Example: A helix with 3 complete loops would require 4 level risers at the entry and exit point. As you can see in the illustration below, 3 level risers would be used elsewhere. It's easier to have taller risers that you can cut down to the levels you need.



Levels
2 Level riser takes you 1 level higher
3 Level riser takes you 2 levels higher
4 Level riser takes you 3 levels higher
5 Level riser takes you 4 levels higher
6 Level riser takes you 5 levels higher

Standard HO Scale Risers (Specifications)

Risers are designed to provide an easy means getting to the next level of a loop/ring while securing the structure of the helix.

Standard Risers are designed to be used where track has no pre-installed roadbed or where no roadbed is used under the track. Measurements from railhead upwards assume bare track is on the floor of the helix deck..

Although the rise height from level to level remains the same, keep in mind that the actual grade itself changes for different radius curves. (e.g. a 24" radius curve provides a steeper grade than that of a 26" curve radius and so on).

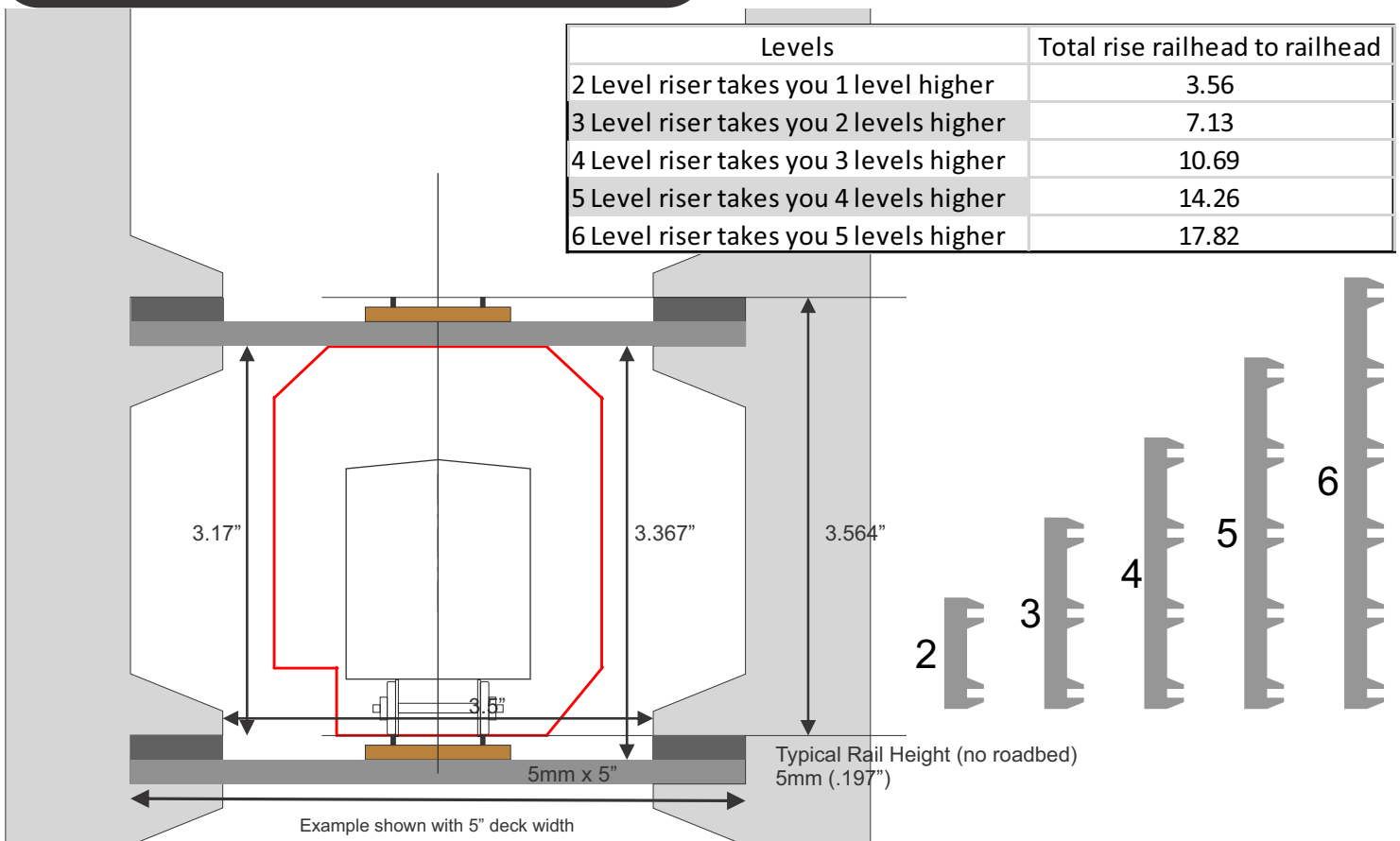
Standard HO Scale Preset Risers

Assuming code 83-100 HO Scale track

- Floor to Ceiling 3.367" (85.519mm)
- Railhead to ceiling 3.17" (80.519mm)
- Rise per loop 3.564" (90.527mm)

This example is shown with HO Scale single track 5" Deck width. With single track decks, where you are using the HO Scale risers, the lateral clearances will be the same for standard or extended.

HO Scale double track 8" deck width lateral clearances differ for the various radiuses available and can also differ for the particular radius track you are using. See your specific radius version for detailed info.



To calculate approximate grade:
 Find the loop/ring circumference of your intended radius and multiple x 3.14
 Find rise measurement (railhead to railhead)

$$\text{Grade \%} = \frac{\text{Rise (railhead to railhead)}}{\text{Circumference}} \times 100$$

Extended HO Scale Risers (Specifications)

Risers are designed to provide an easy means getting to the next level of a loop/ring while securing the structure of the helix.

Extended Risers are designed to be used where track has pre-installed roadbed or where the user has added roadbed under the track. Typical examples are a height of approx 15mm from floor to railhead.

Although the rise height from level to level remains the same, keep in mind that the actual grade itself changes for different radius curves. (e.g. a 24" radius curve provides a steeper grade than that of a 26" curve radius and so on).

Extended HO Scale Preset Risers

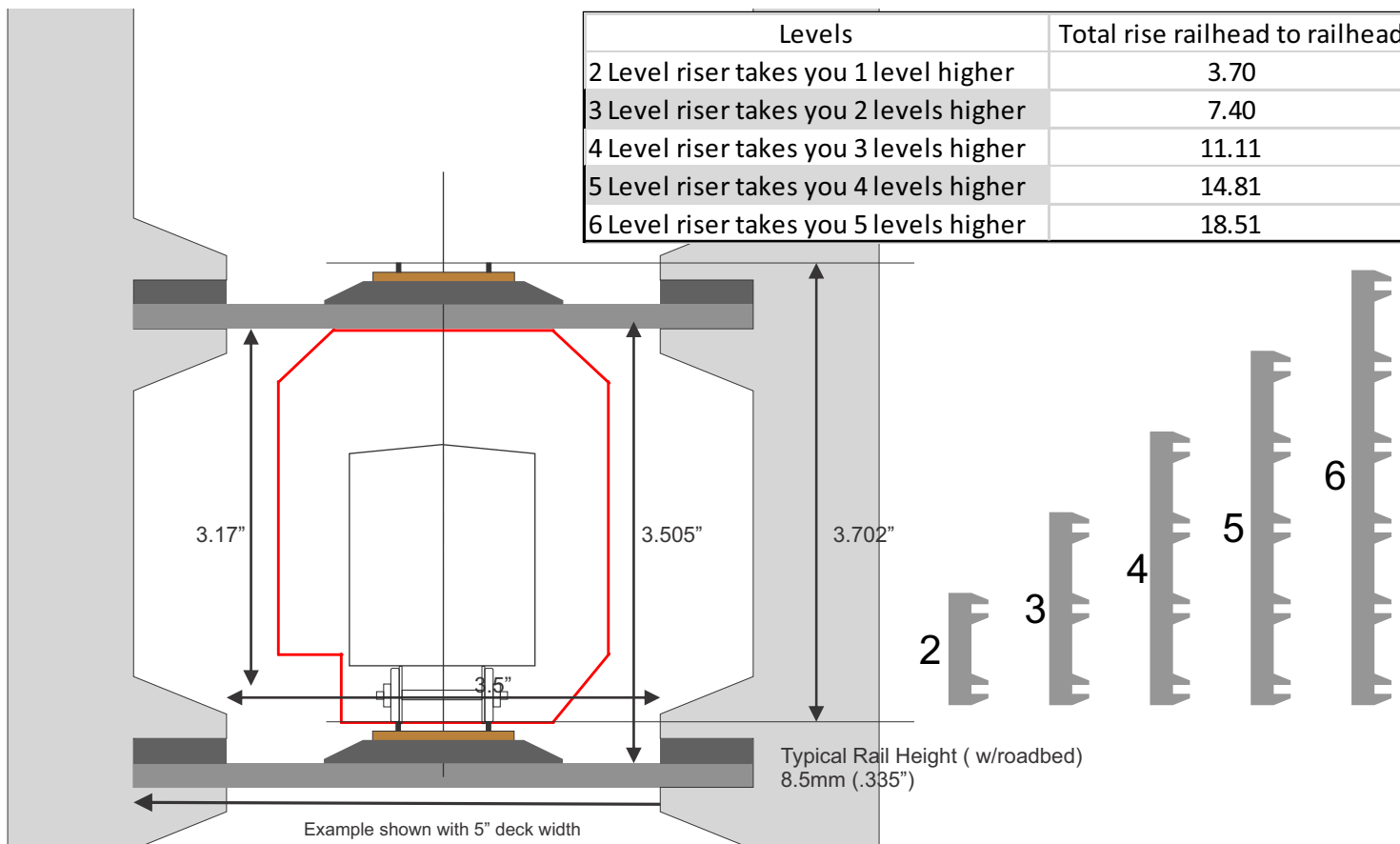
Assuming HO Scale track with Roadbed

Floor to Ceiling 3.505" (80.019mm)
 Railhead to ceiling 3.17" (80.518mm)
 Rise per loop 3.702" (94.019mm)

This example is shown with HO Scale single track 5" Deck width. With single track decks, where you are using the HO Scale risers, the lateral clearances will be the same for standard or extended.

HO Scale double track 8" deck width lateral clearances differ for the various radiuses available and can also differ for the particular radius track you are using. See your specific radius version for detailed info.

Levels	Total rise railhead to railhead
2 Level riser takes you 1 level higher	3.70
3 Level riser takes you 2 levels higher	7.40
4 Level riser takes you 3 levels higher	11.11
5 Level riser takes you 4 levels higher	14.81
6 Level riser takes you 5 levels higher	18.51



To calculate approximate grade:

Find the loop/ring circumference of your intended radius and multiple x 3.14
 Find rise measurement (railhead to railhead)

$$\text{Grade \%} = \frac{\text{Rise (railhead to railhead)}}{\text{Circumference}} \times 100$$

HO Scale Clamps (section connectors)

Listed and sold in packs

Note: Curved deck sections include clamps

This list is provided for those purchasing straight to straight, curve to straight or those that wish to purchase additional curve clamps

With each individual curved deck section purchased, 2 appropriate type clamps are included.

Clamps are not included when purchasing straight deck sections. Straight or transition clamps must be purchased separately.

For HO Scale Single Track Curve Sections

For use with	Item
CDECK-HO-S-18	Clamp-1-HO
CDECK-HO-S-20	Clamp-1-HO
CDECK-HO-S-22	Clamp-1-HO
CDECK-HO-S-24	Clamp-1-HO
CDECK-HO-S-26	Clamp-1-HO
CDECK-HO-S-28	Clamp-1-HO
CDECK-HO-S-30	Clamp-1-HO
CDECK-HO-S-32	Clamp-2-HO
CDECK-HO-S-34	Clamp-2-HO
CDECK-HO-S-36	Clamp-2-HO

For HO Scale Double Track Curve Sections

For use with	Item
CDECK-HO-D-19.5	Clamp-1-HO
CDECK-HO-D-21.5	Clamp-1-HO
CDECK-HO-D-23.5	Clamp-3-HO
CDECK-HO-D-25.5	Clamp-3-HO
CDECK-HO-D-27.5	Clamp-3-HO
CDECK-HO-D-29.5	Clamp-2-HO
CDECK-HO-D-31.5	Clamp-2-HO
CDECK-HO-D-33.5	Clamp-2-HO

HO Scale straight and transition clamps.

For use with	Item
STRAIGHT TO STRAIGHT	Clamp-ST-HO
CURVE TO STRAIGHT	Clamp-T-HO

Curve to straight transition clamps have an oversized width so they can be used with the many radiuses. These must be trimmed to fit your application.

. The only differences in clamp types 1, 2, 3 for both HO and N Scale are that the shapes are slightly different to allow less overlap for a given deck width.

Resources

Online and at your service:

Contact Us Directly:

Website - www.tracksidescenery.com

Email - tracksidescenery@gmail.com

Phone - 304-279-7375 (Normal business hours EST)

Our contact information is on every page of the website at the bottom.



Our Facebook Page:

Updated regularly, we feature not only product announcements, but photos, video, project updates and much more. Located here www.facebook.com/tracksidescenery



Our YouTube Channel:

Here we feature How-To videos, real railfanning, layout tours and much more
Located here - www.youtube.com/tracksidescenery



Our customer photo gallery is full of customer photos showing how they use our products.
Located here > [CUSTOMER PHOTO GALLERY](#)

Thanks for your interest in
Trackside Scenery

Happy Modeling.....